a weakly conductive material applied to a side edge of said counter substrate and said side edge of said TFT substrate and said part of said bus line,

G4 Cont. wherein said weakly conductive material is provided on an outer side of said sealing material.

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

FIG. 9 is amended to show a "DRIVER CIRCUIT MADE UP OF TFTs" as described at page 9, lines 28-29 in the specification. The remaining objections to the drawings and specification have also been amended as requested.

Claims 61-64 and 69-72 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over the admitted prior art in view of Hinata. It is respectfully suggested that these claims completely patentably distinguish over Hinata.

Hinata describes that gas or water vapor may permeate a plastic substrate and enter into a liquid crystal material. The plastic substrate is likely to be deformed by external force. When gas or the like in the liquid crystal material becomes saturated, the plastic substrate may deform and may cause bubbles to form inside the liquid crystal. This may reduce the display performance.

Hinata describes a resin 13 such as epoxy or the like on a side edge of the plastic substrate. The epoxy is impermeable to gas and water vapor. Therefore, the epoxy on the side edge of the plastic substrate may reduce permeation of gas or water into the liquid crystal.

The "Description of the Related Art" in the specification describes the substrate being a gas substrate. Gas or water vapor may permeate the glass substrate much less than the plastic substrate.

Because the plastic substrate in Hinata has a high permeation of gas or water vapor and is flexible, and because the glass substrate in the "Related Art" was low permeation and not flexible, it is respectfully suggested that there is no motivation to combine the Hinata epoxy with the admitted prior art glass substrate. The two are quite simply inherently different, and the motivation to solve a problem in one is certainly not applicable in the other. In order to emphasize this, claims 61-64 are amended to recite a "TFT substrate comprising a glass".

Claims 2, 4-6, 10, 12-14, 17, 21-56, and 65-68 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sawatsubashi in view of Hinata. Sawatsubashi teaches a driving circuit with a TFT. However, Sawatsubashi does not teach or suggest a driving circuit formed in a chip. Therefore, claims

17 and 21-25 are defined as a "control circuit comprising a semiconductor chip".

The amendment filed January 24th stands objected to as allegedly introducing new matter into the specification. Claims 17, 21-25, and 65-68 are amended to obviate this rejection.

In view of the above amendments and remarks, therefore, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 8/6/01

Scott C. Harris
Reg. No. 32,030

SCH/smr

Fish & Richardson P.C.
PTO Customer No. 20985
4350 La Jolla Village Drive, Suite 500
San Diego, CA 92122
Telephone: (858) 678-5070
Facsimile: (858) 678-5099

10126376.doc

VERSION TO SHOW CHANGES MADE

In the Specification:

Paragraph beginning at page 3, line 7 has been amended as follows:

However, in the second-mentioned conventional structure, in an attempt to minimize the size of the liquid crystal display, the counter substrate and the TFT substrate are preferably cut along common planes (in Fig. 4, the top end surface, bottom end surface, and right end surface of each substrate) from which no terminals are brought out. Accordingly, it is difficult to cut the short ring with a laser beam in the final step. In particular, the short ring is cut together with the substrates along a common plane. As shown in Fig. 6, after the cutting, the end surfaces of the substrates are exposed. If static charges are produced on the exposed end surface after the cutting, the internal pixel TFTs will be destroyed, thus making the display device defective. Indicated by [501] 507 is the counter substrate. Indicated by [502] 508 is a sealant material. Indicated by 503 is a liquid crystal material. Indicated by 504 is a bus line. Indicated by 505 is the TFT substrate. Indicated by 506 are the exposed end surfaces.

Claims 65-68 have been canceled.

Claims 17, 21-25, and 61-64 have been amended as follows.

17. (Amended) An active matrix liquid crystal display comprising:

a plurality of pixel TFTs arranged in rows and columns over a TFT substrate and arrayed in a matrix;

driver TFTs formed over said TFT substrate and forming a driver circuit for driving said pixel TFTs;

a bus line provided over said TFT substrate and connected with at least one of said pixel TFTs[, said bus line having a part located adjacent to a side edge of said TFT substrate];

a layer of a liquid crystal material with which said pixel TFTs and driver TFTs are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate;

a nonconductive or weakly conductive material applied or adhesively bonded to a side edge of said counter substrate and [said] a side edge of said TFT substrate [and said part of said bus line];

a sealing material provided between said TFT substrate and said counter substrate and inside said side edge of said counter substrate and said side edge of said TFT substrate; and

a control circuit comprising a semiconductor chip provided under and in contact with said sealing material for controlling said driver circuit.

21. (Amended) An active matrix liquid crystal display comprising:

a plurality of pixel TFTs arranged in rows and columns over a TFT substrate and arrayed in a matrix;

driver TFTs formed over said TFT substrate and forming a driver circuit for driving said pixel TFTs;

a bus line provided over said TFT substrate and connected with at least one of said pixel TFTs[, said bus line having a part located adjacent to a side edge of said TFT substrate];

a layer of a liquid crystal material with which said pixel TFTs and driver TFTs are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate;

a nonconductive or weakly conductive material applied or adhesively bonded to a side edge of said counter substrate and [said] a side edge of said TFT substrate [and said part of said bus line];

a sealing material provided between said TFT substrate and said counter substrate and inside said side edge of said counter substrate and said side edge of said TFT substrate; and

a control circuit comprising a semiconductor chip provided under and in contact with said sealing material for controlling said driver circuit.

22. (Amended) An active matrix liquid crystal display comprising:

a plurality of pixel TFTs arranged in rows and columns over a TFT substrate and arrayed in a matrix;

driver TFTs formed over said TFT substrate and forming a driver circuit for driving said pixel TFTs;

a bus line provided over said TFT substrate and connected with at least one of said pixel TFTs[, said bus line having a part located adjacent to a side edge of said TFT substrate];

a layer of a liquid crystal material with which said pixel TFTs and driver TFTs are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate;

a nonconductive or weakly conductive material applied or adhesively bonded to a side edge of said counter substrate and [said] a side edge of said TFT substrate [and said part of said bus line];

a sealing material provided between said TFT substrate and said counter substrate and inside said side edge of said counter substrate and said side edge of said TFT substrate, said sealing material being provided outside at least said pixel TFTs; and

a control circuit comprising a semiconductor chip provided under and in contact with said sealing material for controlling said driver circuit.

23. (Amended) An active matrix liquid crystal display comprising:

a plurality of pixel TFTs arranged in rows and columns over a TFT substrate and arrayed in a matrix;

driver TFTs formed over said TFT substrate and forming a driver circuit for driving said pixel TFTs;

a bus line provided over said TFT substrate and connected with at least one of said pixel TFTs[, said bus line having a part located adjacent to a side edge of said TFT substrate];

a layer of a liquid crystal material with which said pixel TFTs and driver TFTs are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate;

a nonconductive or weakly conductive material applied or adhesively bonded to a side edge of said counter substrate and [said] a side edge of said TFT substrate [and said part of said bus line];

a sealing material provided between said TFT substrate and said counter substrate and inside said side edge of said counter substrate and said side edge of said TFT substrate, said sealing material being provided outside said pixel TFTs and said driver TFTs; and

a control circuit comprising a semiconductor chip provided under and in contact with said sealing material for controlling said driver circuit.

24.(Amended) A method of fabricating an active matrix liquid crystal display comprising:

a plurality of pixel TFTs arranged in rows and columns over a TFT substrate and arrayed in a matrix;

driver TFTs formed over said TFT substrate and forming a driver circuit for driving said pixel TFTs;

a bus line provided over said TFT substrate and connected with at least one of said pixel TFTs;

a layer of a liquid crystal material with which said pixel TFTs and driver TFTs are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate;

a sealing material provided between said TFT substrate and said counter substrate and outside at least said pixel TFTs; and

a control circuit comprising a semiconductor chip provided under and in contact with said sealing material for controlling said driver circuit,

said method comprising:

cutting said TFT substrate and said counter substrate [and said bus line] outside said sealing material having said control circuit under and in contact with said sealing material; and

applying or adhesively bonding a nonconductive or weakly conductive material to the cut side edge of said TFT substrate and the cut side edge of said counter substrate [and the cud

side edge of said bus line].

25. (Amended) A method of fabricating an active matrix liquid crystal display comprising:

a plurality of pixel TFTs arranged in rows and columns over a TFT substrate and arrayed in a matrix;

driver TFTs formed over said TFT substrate and forming a driver circuit for driving said pixel TFTs;

a bus line provided over said TFT substrate and connected with at least one of said pixel TFTs;

a layer of a liquid crystal material with which said pixel TFTs and driver TFTs are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate;

a sealing material provided between said TFT substrate and said counter substrate and outside said pixel TFTs and said driver TFTs; and

a control circuit <u>comprising a semiconductor chip</u> provided under and in contact with said sealing material for controlling said driver circuit,

said method comprising:

cutting said TFT substrate and said counter substrate [and said bus line] outside said sealing material having said control circuit under and in contact with said sealing material; and

applying or adhesively bonding a nonconductive or weakly

conductive material to the cut side edge of said TFT substrate and the cut side edge of said counter substrate [and the cut side edge of said bus line].

61.(Amended) A semiconductor device comprising:

a pixel TFT provided over a TFT substrate comprising a glass;

a counter substrate located opposite to said TFT substrate;

a bus line provided over said TFT substrate and connected with said pixel TFT, said bus line having a part located adjacent to a side edge of said TFT substrate;

a sealing material provided between said TFT substrate and said counter substrate; and

a nonconductive material applied to a side edge of said counter substrate and said side edge of said TFT substrate and said part of said bus line,

wherein said nonconductive material is provided on an outer side of said sealing material.

62.(Amended) A semiconductor device comprising:

a pixel TFT provided over a TFT substrate comprising a glass;

a counter substrate located opposite to said TFT substrate;

a bus line provided over said TFT substrate and connected with said pixel TFT, said bus line having a part located adjacent to a side edge of said TFT substrate;

a sealing material provided between said TFT substrate and said counter substrate; and

a weakly conductive material applied to a side edge of said counter substrate and said side edge of said TFT substrate and said part of said bus line,

wherein said weakly conductive material is provided on an outer side of said sealing material.

63. (Amended) A semiconductor device comprising:

a pixel TFT provided over a TFT substrate comprising a glass;

a driver TFT provided over said TFT substrate;

a layer of a liquid crystal material with which said pixel TFT and said driver TFT are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate with said layer of the liquid crystal material therebetween;

a bus line provided over said TFT substrate and connected with said pixel TFT, said bus line having a part located adjacent to a side edge of said TFT substrate;

a sealing material provided between said TFT substrate and said counter substrate; and

a nonconductive material applied to a side edge of said counter substrate and said side edge of said TFT substrate and said part of said bus line,

wherein said nonconductive material is provided on an outer side of said sealing material.

64.(Amended) A semiconductor device comprising:

a pixel TFT provided over a TFT substrate comprising a glass;

a driver TFT provided over said TFT substrate;

a layer of a liquid crystal material with which said pixel TFT and said driver TFT are in contact directly or via a thin film;

a counter substrate located opposite to said TFT substrate with said layer of the liquid crystal material therebetween;

a bus line provided over said TFT substrate and connected with said pixel TFT, said bus line having a part located adjacent to a side edge of said TFT substrate;

a sealing material provided between said TFT substrate and said counter substrate; and

a weakly conductive material applied to a side edge of said counter substrate and said side edge of said TFT substrate and said part of said bus line,

wherein said weakly conductive material is provided on an outer side of said sealing material.